LIBRARY
FISH & WILDLIFE SERVICE
PACIFIC OCEANIC FISHERY
INVESTIGATIONS

United States Department of the Interior, J. A. Krug, Secretary
Fish and Wildlife Service, Albert M. Day, Director

Fishery Leaflet 236

Chicago 54, Ill. May 1947

FISHERIES EDUCATION AND RESEARCH IN JAPAN

FISHERIES EDUCATION AND RESEARCH IN JAPAN

TABLE OF CONTENTS

Page

Summary 2

A. Introduction. 3
B. Fisheries Educational Institutions. 4
C. Federal Fisheries Research Stations 12
D. The Prefectural Fisheries Research Stations 14
E. Marine Research Stations Associated with Colleges and Universities. 16
F. Fisheries and Marine Research Stations Operated by Private Companies 16
G. Privately Endowed Marine Research 17
H. Research Stations in Former Colonies and Mandated Areas 17
I. Plans for the Future. 17

Figures

Figure 1. The Kanagawa Prefectural Fisheries School at Misaki 5
Figure 2. Fisheries Educational Institutions 7
Figure 3. Tokyo Fisheries College. 8
Figure 4. The Central Imperial Fisheries Experimental Station, Tokyo 12
Figure 5. Fisheries research vessel of the Imperial Fisheries Experimental Station, Tokyo. 13
Figure 6. Fisheries Research Stations of Japan and Its Former Colonies 15
Figure 7. Oyster cultivation at Onagawa Fisheries Experimental Station 16

Tables

Table 1. Prefectural Fisheries School of Japan. 18
Table 2. Fisheries Colleges of Japan. 19
Table 3. Universities in Japan with Departments of Instruction in Fisheries 20
Table 4. Fisheries Research Stations operated by the Japanese Central Government
Branch Stations of the Central Imperial Fisheries Experimental Station 21
Table 5. Prefectural Fisheries Experimental Stations. 22
Table 6. Marine Research Stations associated with Universities and Fisheries Colleges. 24
Table 7. Privately owned Fisheries Experimental Stations. . . . 25
Table 8. Privately endowed Marine Laboratory. 26
Table 9. Fisheries Experimental Station in Former Colonies and Mandated Areas. 26

FISHERIES EDUCATION AND RESEARCH IN JAPAN

SUMMARY

1. In keeping with the importance of fish and marine products in the general economy of Japan, the Japanese Government has placed much emphasis on fishery education and fisheries research, both biological and technological.

2. Japan has 32 prefectural fisheries schools in 24 prefectures. These schools give special training in the biology of fishes and chemistry of marine products as well as technical and practical training in fishing, fish processing, navigation, boat building, and allied subjects. The schools are designed to train men to be expert fishermen, and cannery managers. Graduates from the prefectural fisheries schools are eligible to enter the two fisheries colleges, one of which is at Hakodate, Hokkaido, and the other at Tokyo. The colleges offer three-and five-year courses in fisheries. Three of the seven Imperial universities in Japan have fisheries departments in their faculties of agriculture. The departments offer a three-year course leading to a college degree. This is the highest level of fisheries education in Japan. Japan has 118 government-supported fisheries and marine products research stations and branches. Six are operated by the government and 112 by prefectures. These stations conduct research in fisheries biology, fishing methods, and fisheries products.

3. Twenty-one marine and freshwater biological stations are associated with universities and fisheries colleges. These stations are designed for instruction, but much valuable research is done in fisheries biology by the university professors. Two of the large fishing companies operate three laboratories for research in the biology of fishes. One privately endowed marine research station is in Japan. In addition to the marine stations in Japan Proper, the Japanese operated 14 fisheries research stations in Korea, five in Formosa, one in Karafuto, one in the South Seas, one in Kwantung, and three in Manchuria.

FISHERIES EDUCATION AND RESEARCH IN JAPAN 1/

A. Introduction

1. Japan, because of its dense population, meager food resources, and insular position, was driven by necessity to become a fishing nation. Fish supply most of the animal protein and a considerable amount of the fat in the Japanese diet. The Japanese developed into such skillful fishermen and extended their fishing grounds so far afield that they were able to produce for many years prior to 1941, not only enough fish for their own consumption, but developed a vigorous fish export trade as well.

2. In keeping with the great importance of the fisheries in Japan, the educational system of the country and the research facilities in fisheries biology and technology have received more attention and government support than in any other country in the world.

3. All the elementary schools in Japan teach about fish in their natural history courses. When a student is graduated from the elementary school, he may attend any one of 32 middle fisheries schools. These are known as Prefectural Fisheries Schools (Kenritsu Suisan Gakko). The schools are located so that nearly every prefecture with fishery interests has one or more. The middle fisheries schools are designed to train students to be expert fishermen, cannery foremen, net-makers, and for other semispecialized jobs. Graduates from the prefectural fisheries schools are eligible to enter the fisheries colleges.

4. The two fisheries colleges in Japan are the Hakodate Fisheries College in Hakodate, Hokkaido, and the Tokyo Fisheries College in Tokyo 2/. These colleges offer three- to five-year courses in coastal fisheries, fisheries technology, aquiculture, and teacher training. The physical plants of both institutions are now being used as billets for occupation troops. The colleges continue to operate, however, in temporary quarters.

5. In addition to the fishery schools and colleges, three of

1/ The information presented in this report (No. 37) was gathered and compiled by Capt John L. Kask, Fisheries Division, Natural Resources Section, General Headquarters, Supreme Commander for the Allied Powers, Tokyo, 1946. (Reproduced by permission of the Civil Affairs Division, War Department).

2/ Until April 1946 the Tokyo Fisheries College was known as the Imperial Fisheries Institute.

the seven Imperial universities in Japan Proper have departments of fisheries. These university departments represent the highest level of fisheries education in Japan. Three-year courses are given which lead to a university degree, the Gakushi. Graduate schools are also provided which grant the Hakushi or doctor's degree. The universities train men for research and the highest civil service positions attainable by techn cally trained men.

6. Besides the provision made for fisheries education at every level and for every purpose, Japan has 118 government-supported fisheries and marine products research stations and branch stations. The Imperial Government supports the largest, the Imperial Fisheries Experimental Station in Tokyo, with five branch stations strategically located throughout the country. The station and its branches carry on investigations in all fields of fisheries biology, fisheries chemistry, and oceanography. They also gather daily records and prepare monthly reports on the location of warm and cold bodies of water, broadcast weather reports, and the whereabouts and movements of fish.

7. Forty-four prefectures support 112 research stations and branch stations. These carry on research in local problems relating to the fisheries industry, both biological and chemical. Some of the stations and branch stations do only fresh-water research. In addition to these, 21 marine and fresh-water biological stations that do biological work in fisheries and related subjects are associated with universities and colleges. Two large fishing companies have private laboratories with branch stations doing biological and chemical research in fisheries, and there is one privately endowed marine fisheries and biological station. A total of 145 marine and fresh-water fisheries research stations are investigating the chemistry and biology of marine products in Japan Proper. One of the stations is in Okinawa.

8. An important research station is located in Fusan, Korea, in addition to 13 branch or provincial stations in Korea, five stations in Formosa, one in Karafuto, one in the South Seas (Palau), one in Kwantung, and three in Manchuria. Before the war, 170 marine research stations were operated in areas controlled by Japan.

B. Fisheries Educational Institutions

1. The Prefectural Fisheries School

a. Entrance to the 32 prefectural fisheries schools in Japan is limited to graduates of the six-year elementary schools. At times these schools are run separately from the prefectural fisheries research stations. In some cases the staff serves both as teachers and as members of the research staff.

b. A typical example is the Kanagawa Prefectural Fisheries

School at Misaki (see Figure 1.).

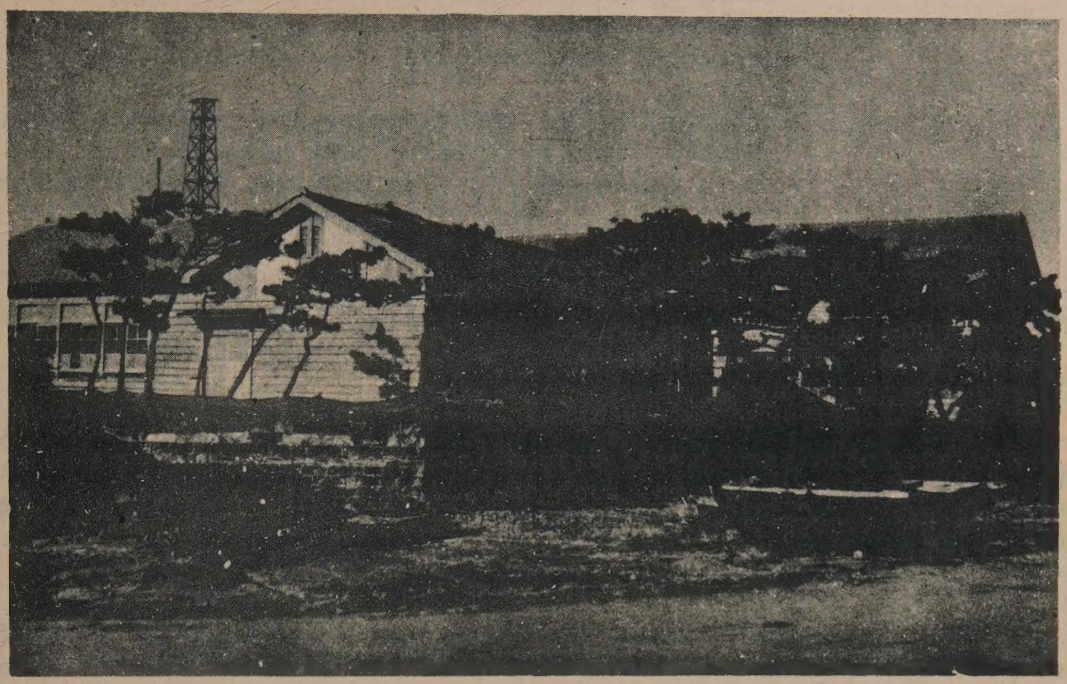

Figure 1. The Kanagawa Prefectural Fisheries School at Misaki. The Prefectural fisheries radio station is operated in conjunction with the school.

(1) This school consists of a two-story frame building, which was designed to accomodate 200 students; an annex; and a separate laboratory.

(2) Entrance to the school is limited to students who have completed the elementary schools, or persons who are at least 12 years old and have passed a test equivalent to that of the graduation test of the elementary schools.

(3) Though the school was designed to accomodate 200 students, only 91 were registered in 1945. The age of the students varied from 13 to 19 years.

(4) The regular teaching staff has six members including the principal, plus three part-time instructors, a wireless telegraph instructor, two clerks, a part-time school doctor, and a school dentist.

(5) The school course lasts four years, and the following subjects are taught: Ethics, geography,

history, music, mathematics, English, wireless telegraphy, zoology, fisheries, hydrology, meteorology, fishing boats, machinery, drafting, practical boat exercises, and navigation.

(6) Support for the school comes from entrance fees, tuition fees, and prefectural government grants. Its expenditures in 1945 amounted to approximately ¥27,000.

c. A list of the prefectural fisheries schools is given in Table 1. Locations are shown in Figure 2.

2. The Fisheries Colleges

a. The Hakodate Fisheries College, at Hakodate, Hokkaido, operates under the Ministry of Education, and the Tokyo Fisheries College, Tokyo, operates under the Ministry of Agriculture and Forestry. These colleges or higher schools of fisheries, give courses which last from three to five years according to the type of study selected.

b. The Tokyo Fisheries College is a direct descendant of the oldest higher fisheries school in Japan. The first fisheries school was organized in 1889 under the auspices of the Fisheries Society of Japan. This school was transferred from the society to the Imperial Government of Japan in 1897, when research and experimentation were added to its original scope. In 1929 it was formally reorganized as an educational institution and was called the Imperial Fisheries Institute (Suisan Koshujo). In April 1946 the name was changed to Tokyo Fisheries College (see Figure 3).

c. The College operates under the Ministry of Agriculture and Forestry. It is the only educational institution in Japan not under the supervision of the Ministry of Education. Thus, a certain degree of freedom and independence has resulted.

d. The appropriations received by the College since 1940 are as follows:

Year	Regular Budget	Special Work	Total
1940	¥ 487,880	¥ 76,169	¥ 564,049
1941	532,841	57,586	590,427
1942	539,754	23,198	562,952
1943	567,949	100,909	668,858
1944	620,131	56,501	676,632
1945	725,671	662,807	1,388,478

The steady increase in appropriations in the regular budget and the steep increases in the special work budget during the war years, should be noted.

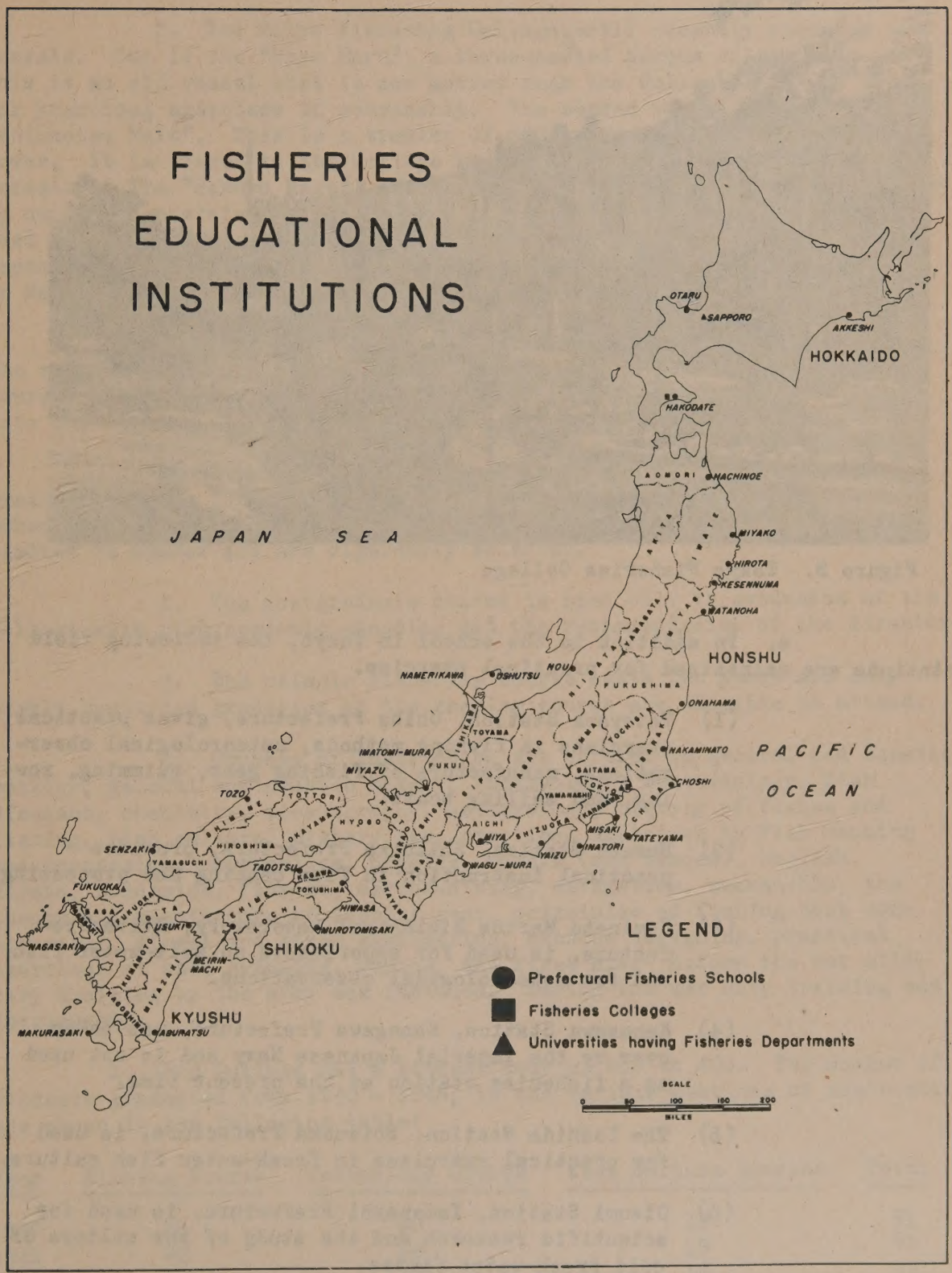
FISHERIES
EDUCATIONAL
INSTITUTIONS
JAPAN SEA
PACIFIC OCEAN
HOKKAIDO
HONSHU
SHIKOKU
KYUSHU
OTARU
SAPPORO
AKKESHI
HAKODATE
AOMORI
HACHINOE
MIYAKO
HIROTA
KESENNUMA
SENDAI
ONAHAMA
NAKAMINATO
CHOSHI
TOYAMA
NAMERIKAWA
OSHUTSU
NOU
IMATOMI-MURA
MIYAZU
TOZO
SENZAKI
HIROSHIMA
YAMAGUCHI
TADOTSU
FUKUOKA
USUKI
NAGASAKI
MAKURASAKI
ABURATSU
MEIRIN-MACHI
HIWASA
MUROTOMISAKI
WAGU-MURA
YAIZU
MISAKI
INATORI
TATEYAMA
LEGEND
Prefectural Fisheries Schools
Fisheries Colleges
Universities having Fisheries Departments
SCALE
0 50 100 150 200
MILES

Figure 2

Figure 3. Tokyo Fisheries College

e. In addition to the school in Tokyo, the following field stations are maintained for practical exercise.

(1) Tateyama Station, Chiba Prefecture, gives practical exercises in fishing methods, meteorological observations, manufacture of fishing gear, swimming, rowing, and sailing boats.

(2) Numazu Station, Shizuoka Prefecture, provides practical instruction in fish canning and processing.

(3) Kominato Marine Biological Laboratory, Chiba Prefecture, is used for experiments on salt-water fish and for meteorological observations.

(4) Kanasawa Station, Kanagawa Prefecture, was taken over by the Imperial Japanese Navy and is not used as a fisheries station at the present time.

(5) The Yoshida Station, Shizuoka Prefecture, is used for practical exercises in fresh-water fish culture.

(6) Oizumi Station, Yamanashi Prefecture, is used for scientific research and the study of the culture of cold fresh-water fishes.

f. The Tokyo Fisheries College until recently operated two vessels. One is the "Unyo Maru", a three-masted barque of 444 tons. This is an old vessel that is now moored near the College. It was used for practical exercises in seamanship. The second vessel is the "Shimkotsu Maru". This is a trawler of 500 gross tons and 1400 horsepower. It is loaned to the College by the Ministry of Agriculture and Forestry. The "Hakuyo Maru", 1327 gross tons and 1400 horsepower, formerly owned and operated by the College and one of the best equipped and most modern fish research vessels in the world, was taken over by the Japanese Navy in February 1943 and was sunk by Allied submarine action in March 1944.

g. The College divides its curriculum into three sections: The regular course, the postgraduate course, and the pelagic fisheries course. The regular and the postgraduate courses are further subdivided into the fishing, the technological, and the fish culture courses.

h. The regular course lasts four years. Only successful graduates of the four-year course of the middle or prefectural fisheries school, or high school graduates are eligible to enter. Candidates are limited in number and are rigorously selected.

i. The postgraduate course is open only to graduates of the College with high academic standing and the recommendation of the director.

j. The pelagic fisheries course lasts two years and only highly qualified graduates of the regular course are eligible to attend.

k. Courses of instruction are offered in general and aquatic zoology, general and aquatic botany, ichthyology, bacteriology, fish diseases, chemistry, oceanography, meteorology, history of fishes and fishing, fish culture, fishery law, practical exercises in fish canning and processing, mathematics, physics, morals (now banned), English, German, economics, finance, merchandizing, navigation, seamanship, the theory and manufacture of fishing gear, principles of fishing boat construction, diesel and steam engineering, machine designing, practical exercises at sea, swimming, rowing, and first aid. Before the war military training by the army was included. During the war navy training was introduced.

l. The College has a student body of 300 to 400. The number of students graduated from 1940 - 1945, in the various sections of instruction, are shown in the following table:

Year	Fishing Course	Technology Course	Fish Culture Courses	Total
1940	33	30	18	81
1941	32	28	19	79
1942	35	32	16	83

Year	Fishing Course	Technology Course	Fish Culture Course	Total
1943	36	36	20	92
1944	37	34	29	95
1945	51	46	26	123

The total number of graduates from 1897 to 1945 was 2,778. The Institute employs 170 people including the boat crews.

e. The Hakodate Fisheries College parallels the teaching and research carried on at the Tokyo Fisheries College. In addition to the courses outlined above, the Hakodate College offers a course for training teachers in fisheries subjects. Summary outlines of both institutions are given in Table 2.

3. The Universities

a. Three of the seven Imperial universities in Japan Proper have departments of fisheries. These universities are the Hokkaido Imperial University at Sapporo, Hokkaido, the Tokyo Imperial University, Tokyo, and the Kyushu Imperial University, Fukuoka. These departments offer three-year courses which lead to a college degree in fisheries, the "Gakushi" which corresponds to a Master's degree.

b. The oldest and most renowned department of fisheries is at the Tokyo Imperial University. It forms one of seven departments in the Faculty of Agriculture. On the staff are four professors, three assistant professors, three lecturers, five regular, and seven or eight part-time laboratory assistants. Graduates from the Tokyo Imperial University, for the most part, make up the staff of the fisheries departments of the other two universities.

c. Courses of instruction are offered in the following subjects: Zoology (general and aquatic), botany, plankton, oceanography, properties of natural water, principles of fisheries, culture of aquatic products, methods of fishing, technology of fishery products, hydrobiology, bacteriology and pathology, animal histology and embryology, organic chemistry, refrigeration, fisheries law, applied meteorology, fishing boat machines, fishing boats, and a seminar in fishing. Elective courses offered are experimental genetics, political economy, physical chemistry, and biochemistry.

d. Each faculty also provides a university-hall (Daigaku-In) or postgraduate course. No regular courses of lectures or seminars for graduate students are given, although occasional courses may be offered. Two years (usually) are spent in research under a major professor. At the end of this time, the student may present a thesis, which consists of original research, to an examining committee. If the committee looks with favor on the thesis, the candidate is granted the doctor's degree or "Hakushi".

e. The academic year of the university begins 1 April and ends 31 March of the following calendar year. The school year is divided into two terms: the summer term from 1 April to 31 October, and the winter term from 1 November to 31 March. A summer vacation from 11 July to 10 September and a winter vacation from 25 December to 7 January are provided. During the war these schedules were not always maintained.

f. Students applying for entrance to the university must be graduates of the higher schools (Koto-Gakko), of the higher department of the Peers School, or students who have satisfactorily passed an entrance examination given by the faculty. The graduates of the higher schools and higher department of the Peers School take precedence over other applicants. At times only a fraction of the eligible students who apply are admitted to the university, as all faculties and departments of faculties are limited in the number of students they can accomodate.

g. The number of students in the Department of Fisheries during the years 1942 to 1945 was about 60, or 20 in each of the three classes. The number of students before 1942 was only about one-half that number.

h. Summer courses in marine zoology and fisheries are conducted at the Marine Biological Station at Misaki, which is operated by the Faculty of Sciences. Students in the first year attend these classes and exercises for four weeks, in the second year for three weeks, and in the third year attendance is optional.

i. In addition to the faculties at the university and at the Misaki Marine Biological Station, the Department of Fisheries maintains two fisheries laboratories in Aichi Prefecture. One is at Shinmaiko on Chita Peninsula and one is at Izumi-mura on Atsumi Peninsula. The former is used for the study of bay and shallow-water fishes, whereas the latter is equipped for studying the culture of fresh-water fishes. An aquarium is attached to the Shinmaiko Laboratory, where many fresh-and salt-water fishes are exhibited to the public. Research is also carried on in the culture of seaweed and oysters. No instruction is given at these stations, but their facilities are used by university staff members for research. Only one professor and two assistants are on the resident staff of these stations.

j. About one-half of the yearly expenditures of the university is derived from government appropriations. The remainder is derived from tuition fees and from incomes of properties owned by the University.

k. The research carried on by the faculty and the senior students is usually published in the Journal of the College of Agriculture. In 1943 publication was suspended. It was then in its fifteenth volume. At times fisheries researches are also reported in the Journal of the Faculty of Science (Volume 6, 1943), in Annotationes Zoological Japonenses

(Volume 22, 1943), and in the Zoological Magazine (Dobutugaku Zassi, Volume 56, 1944).

1. The fisheries departments of the other two universities are patterned largely on the Fisheries Department in the Tokyo Imperial University. Both schools have been established only a few years (see Table 3).

C. Federal Fisheries Research Stations

1. The Japanese Imperial Government supports the largest fisheries research station in Japan. This is the Central Imperial Fisheries Experimental Station in Tokyo. The Experiment Station operates under the Ministry of Agriculture and Forestry (Bureau of Fisheries), on an annual grant of ¥720,000.

2. The physical plant consists of three main buildings. The first of these buildings has the administrative office, the director's laboratory, meeting rooms, specimen rooms, records room, and library. The other two buildings are the chemical and oceanographical laboratories. Additional buildings are a large experimental water tank and aquarium building, a radio building, a refrigeration building, a small experimental cannery, extensive machine ships, and numerous small service buildings; 25 buildings in all (see Figure 4). The station operates a research

Figure 4. The Central Imperial Fisheries Experimental Station, Tokyo

Figure 5. Fisheries research vessel of the Imperial Fisheries Experimental Station, Tokyo.

vessel the "Soyo Maru", 220 gross tons, with a 333-horsepower diesel engine (see Figure 5).

3. In addition to its plant in Tokyo, the Imperial Fishery Experimental Station has field stations at Ueda City, Nagano Prefecture; the Kasaoka Station, Kamizuma-Uchi-Mura, Okayama Prefecture; the Nanao Station, Nanao, Ishikawa Prefecture; three minor experimental places at Arashima, Shimane Prefecture; Minato in Chiba Prefecture; and Misaki in Kanagawa Prefecture. Each field station has a permanent staff of three or four persons. The experimental places have no regular staffs.

4. The present staff consists of 21 expert investigators, 14 assistant investigators, and approximately 85 lay employees, including the ship's crew.

5. The investigations carried on by the Fisheries Experiment Station are divided into 11 sections as follows:

a. Fisheries investigations (life history and population studies)

b. Fish technology (studies in net preservatives, etc.)

c. The chemistry of fishery products

d. Fish culture

e. Fish boat design

f. Fishing machinery

g. Physical investigations

h. Chemical investigations

i. Biological investigations (taxonomy, etc.)

j. Oceanographical investigations (hydrography, marine biology, fish forecasting).

k. Coordinating experiments of other stations.

6. This experiment station is obviously held in high repute by the Japanese Government. It was allowed to use its research vessel throughout the war and its substantial appropriation of ¥720,000 a year was never reduced. The station authorities are preparing plans to expand their physical plant in the immediate future and to increase the number of workers to take care of additional research necessary for the full use and development of the fishing industry.

7. The Imperial Fisheries Experiment Station publishes the results of its research in three main periodic publications.

a. The Oceanographical Investigations, a semiannual report. The last published issue is the July - December issue No. 71, published in October 1943.

b. The Journal of the Imperial Fisheries Experiment Station. This is an annual journal and includes dissertations on the general results of the station's investigations. The last published volume is No. 13 containing papers No. 91 - 93, published in March 1943.

c. Fishery Investigations, published annually. This includes reports on the chemistry and the biology of fishes and other marine products. The last published volume is No. 9, containing papers No. 78 - 83, published in March 1943.

8. The Central Imperial Fisheries Station and its branches are listed in Table 4. Locations are shown in Figure 6.

D. The Prefectural Fisheries Research Stations

1. Each prefecture with fisheries interests supports a fisheries research laboratory. These laboratories conduct research on

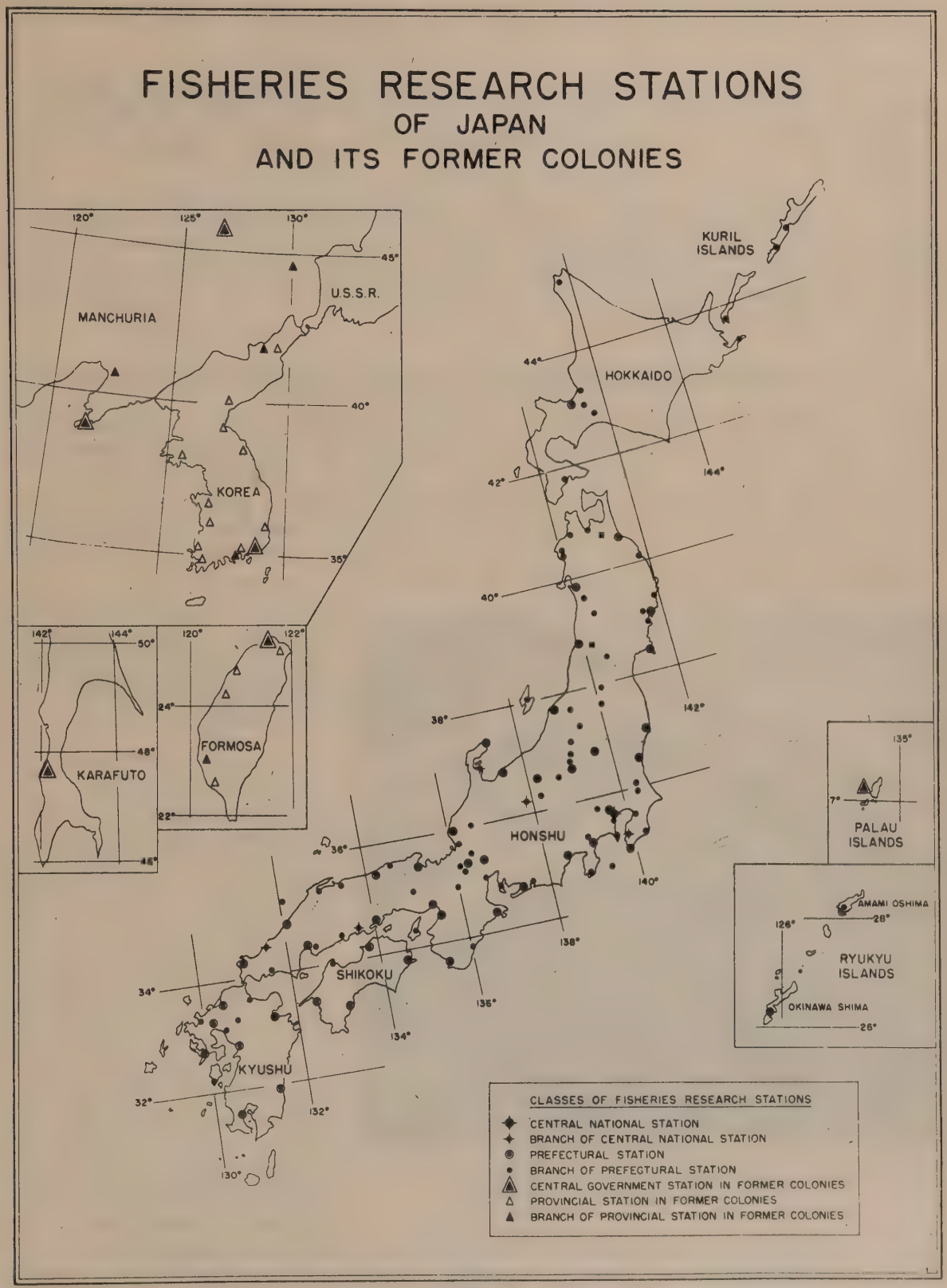
FISHERIES RESEARCH STATIONS
OF JAPAN
AND ITS FORMER COLONIES
MANCHURIA
U.S.S.R.
KOREA
KURIL ISLANDS
HOKKAIDO
HONSHU
SHIKOKU
KYUSHU
KARAFUTO
FORMOSA
PALAU ISLANDS
AMAMI OSHIMA
RYUKYU ISLANDS
OKINAWA SHIMA
CLASSES OF FISHERIES RESEARCH STATIONS
CENTRAL NATIONAL STATION
BRANCH OF CENTRAL NATIONAL STATION
PREFECTURAL STATION
BRANCH OF PREFECTURAL STATION
CENTRAL GOVERNMENT STATION IN FORMER COLONIES
PROVINCIAL STATION IN FORMER COLONIES
BRANCH OF PROVINCIAL STATION IN FORMER COLONIES

Figure 6

problems of local interest, both biological and chemical. They may or may not be assoicated with the prefectural fisheries school.

2. The prefectural stations often operate large fishing and research vessels. The fish caught incidental to fishing trials is sold on the public market. The money from the fish sales reverts back to the government to help defray the expenses of the stations.

3. Fishery police or patrol vessels often operate from these stations. At times investigators are called upon to act as police in addition to their other duties, although regular water policemen under the prefectural police department are also supplied. A list of the prefectural stations is given in Table 5.

E. Marine Research Statinns Associated With Colleges and Universities

1. Fifteen marine research stations are associated with universities in Japan and six are associated with colleges. Though these stations are provided primarily for parctical instruction for students, they also serve as places of research for university professors. Life-history work and research in systematic ichthyology is done at these places as well as research in other marine organisms (see Figure 7). A list of the university and college marine stations is given in Table 6.

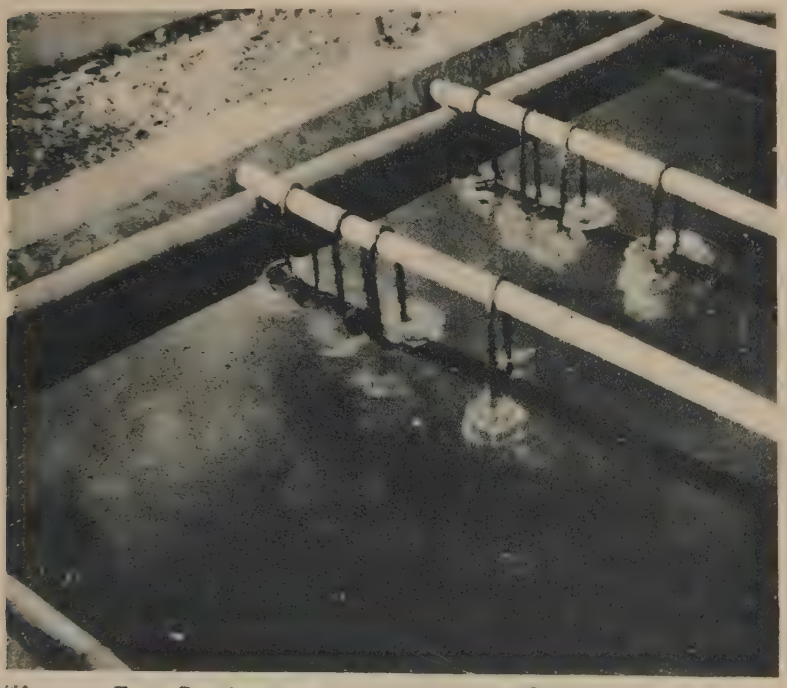

Figure 7. Oyster cultivation at Onagawa Fisheries Experimental Station. Artificially reared larvae are collected on shells suspended in the tank.

F. Fisheries and Marine Research Stations Operated by Private Companies.

1. Of the three big fishing companies in Japan, two have laboratories that conduct research in marine biology and chemistry. In fact, some of the best fisheries research work done in Japan is done under the auspices of the Nippon Suisan K K (Japan Marine Products Co., Ltd.). The research was initiated and conducted by the company and the research records were carefully guarded. The two research

stations and one branch station owned and operated by private companies are listed in Table 7.

G. Privately Endowed Marine Research

1. Japan has one privately endowed marine research station. This station, near Shimoda, Shizuoka Prefecture, was founded and supported by Takanage Mitsui. All phases of marine biological research are carried on at this station by both paid and volunteer workers (see Table 8).

H. Research Stations in Former Colonies and Mandated Areas.

1. In Korea a large marine research station at Fusan is supported by the Central Korean Government. The central station has two branch stations. In addition to this, 11 provincial stations and branch stations are doing research in problems of local interest.

2. Formosa has one central research station with a branch station and four provincial stations.

3. In addition to the above the Japanese operated one research station at Karafuto, one at Pelau in the South Pacific, one at Dairen, Kwantung, and three in Manchuria.

4. The stations of the former colonies and mandated areas are reviewed in Table 9 and Figure 6.

I. Plans for the Future

1. In spite of the imposing array of fisheries schools and experimental stations which Japan already has, the Japanese are thinking of adding more. New schools are being opened in Shimane and Wakayama Prefectures. Petitions are being circulated by the Japan Fishermen's Union to open schools on Kurahashi Island, Hiroshima Prefecture; on Otsushima Island, Yamaguchi Prefecture; and at Tsuki Mura, Fukuoka Prefecture. They also plan to petition for a third fisheries college to be situated in Northern Kyushu. In each case it is contemplated to use grounds and existing buildings formerly used by the military.

2. A petition is also being presented for the use of abandoned naval and army barracks and installations and for additional investigations in marine biology. A number of outstanding investigators want this research to be supported independently by public subscription rather than by a governmental department. More than ¥100,000 has already been collected toward this goal.

3. This tremendous activity in education and research in fisheries indicates to what extent Japan believes her future lies in the seas.

TABLE 1. - PREFECTURAL FISHERIES SCHOOL OF JAPAN

Prefecture	Address	Principal	Years of Study	Number of Students	Courses Taught
Hokkaido	Wakatake, Otaru	Kanji Tobishima	4	340	Fishery, Technology, Pisciculture
	Kamiiso, Kamiiso	Takeo Yamashita	3	180	Fishery, Technology
	Akkeshi, Akkeshi	Ken Saito	3	240	Fishery, Technology
Aomori	Minato, Hachinoe	Shigetoshi Kamo	4	320	Fishery, Technology
Iwate	Miyako, Iwate	Saburo Suga	3	300	Fishery, Technology
	Hirota, Kesen	Shin Adashi	4	200	Fishery, Technology
Miyagi	Watanoha, Ashika	Naoshi Takeda	4	400	Fishery, Technology
	Kesennuma, Motoyoshi	Sho Nakamura	4	200	Fishery
Fukushima	Onahama, Iwaki	Motoo Satooka	4	200	Fishery, Technology
Ibaraki	Nakaminato, Naka	Shun Matsuda	4	200	Fishery, Technology
Chiba	Tateyama, Chiba	Koishi Ishii	4	400	Fishery, Technology, Pisciculture
	Choshi, Chiba	Ushizo Nishioka	4	200	Fishery, Technology
Kanagawa	Misaki, Miura	--	4	200	Fishery
Niigata	Nou, Nishikubiki	Ishiro Nonaka	4	200	Fishery, Technology, Pisciculture
Toyama	Namerikawa, Nakaniikawa	Mamoru Sasaki	4	200	Fishery, Technology
Ishikawa	Ushutsu, Fugeshi	Ryoji Inoue	3	150	Fishery, Technology
Fukui	Imatomi, Onyu	Suketichi Konishi	3	360	Fishery, Technology, Pisciculture
Shizuoka	Yaizu, Shida	Hideo Senuma	4	400	Fishery, Technology, Pisciculture
	Inatori, Inatori	Yukishi Iwasaki	3	150	Fishery
Aichi	Miya, Hoi	Tadashi Nagai	3	120	Fishery, Technology
Mie	Wagu, Shima	Motoichi Iima	4	400	Fishery, Technology
Kyoto	Miyazu, Yosa	Ryohei Ohata	3	150	Fishery, Technology
Shimane	Toso, Suki	Tadao Ishikawa	4	160	Fishery, Technology
Yamaguchi	Senzaki, Otsu	--	3	300	Fishery
Kagawa	Tadotsu, Nakatado	--	3	150	Fishery, Technology
Tokushima	Hiwasa, Kaibu	Iwao Yamaguchi	4	200	Fishery, Technology
Ehime	Meirin , Uwajima	--	3	150	Fishery
Kochi	Murotomisaki, Aki	Tokuji Ishii	3	150	Fishery, Technology
Miyazaki	Aburatsu, Minaminaka	Kyoichiro Imanishi	4	200	Fishery, Technology
Nagasaki	Toinokubi, Nagasaki	Yoshio Kikkawa	3	480	Fishery, Technology
Oita	Usuki, Kita-amabe	Fumishige Harashiri	4	200	Fishery
Kagoshima	Makurasaki, Kawabe	Koreshige Makino	4	360	Fishery, Technology, Pisciculture

TABLE 2. - FISHERIES COLLEGES OF JAPAN

I. Name of College:	Tokyo Fisheries College, formerly Imperial Fisheries Institute (Suisan Koshujo)
Address:	Etchujima Fukagawa-ku, Tokyo (Building presently used to billet occupation troops. Nearby temporary quarters being used.)
Director:	Yasukichi Sugiura-to-March 1946: Now Yoshikatsu Matsuike
Source of support:	Ministry of Agriculture and Forestry
Annual appropriation:	¥ 725,671 (1945)
Number of people employed:	Professors 37 Assistant professors 21 Lecturers 3 TOTAL 61 (regular officers) 2 (irregular officers)
Number of students:	712 (regular course 199 in February, 1946.)
Period of study:	3 Years for regular course. 5 Years for postgraduate course. 5 Years for pelagic fisheries course.
Admission of student:	1. Those who have completed the ordinary course of middle or prefectural fisheries school. 2. Those who have completed ordinary course of high school.
Courses:	1. Fishery course. 2. Technological course. 3. Pisciculture course. 4. Postgraduate course. 5. Pelagic fisheries course.
Field laboratories:	1. Tateyama Marine Biological Station, Chiba Prefecture. 2. Numazu Marine Technological Station, Shizuoka Prefecture. 3. Kominato Marine Biological Station, Chiba Prefecture. 4. Yoshida Fish Farm, Shizuoka Prefecture. 5. Oizumi Fish Farm, Yamanashi Prefecture.
Training vessels:	1. Unyo Maru, 444 gross tons, steel sailing vessel 2. Seicho Maru, 55 gross tons, 105 HP

II. Name of College:	Hakodate Fisheries College or Higher Fisheries School (Hakodate Koto Suisan Gakko)
Address:	19, Higashikawa-machi, Hakodate, Hokkaido Prefecture. (Buildings used at present to billet occupation troops. Nearby temporary quarters are being used.)
Director:	Sataro Murayama
Source of support:	Ministry of Education
Number of people employed:	Professors 20 Assistant professors 9 Lecturers 8 TOTAL 37
Number of students:	240, fixed number; 40, one class.
Period of study:	3 Years for regular course. 5 Years for postgraduate course. 5 Years for pelagic fisheries course. (established in 1936)
Admission of students:	1. Those who have completed the ordinary course of middle or prefectural fishery school. 2. Those who have completed the ordinary course of high school.
Courses of instruction:	1. Fishery course. 2. Technological course. 3. Pisciculture course. 4. Pelagic fisheries course. 5. Teachers training course.
Field laboratories:	Coastal Laboratory at Oshoro Village, Oshoro-gun, Shiribeshi, Hakodate.
Training vessels:	1. Oshoro Maru. 2. Kamome Maru.

TABLE 3. - UNIVERSITIES IN JAPAN WITH DEPARTMENTS OF INSTRUCTION IN FISHERIES

I.	Name of university:	Tokyo Imperial University (Tokyo Teikoku Daigaku)
	Address:	Mukogaoka, Hongo-ku, Tokyo
	Head of fishery department:	Masashi Ishikawa
	Source of support:	Ministry of Education
	Period of study:	Three years
	Number of staff:	Professors 4 Assistant professors 3 Lecturers 3 TOTAL 10
	Number of students admitted:	60 from 1942 to 1945, 30 before 1942
II.	Name of university:	Kyushu Imperial University (Kyushu Teikoku Daigaku)
	Address:	Hakozaki, Fukuoka, Fukuoka Prefecture
	Head of fishery department:	Keitaro Uchida
	Source of support:	Ministry of Education
	Period of study:	Three years
	Number of staff:	Professors 4 Assistant professors 4 Lecturers 1 TOTAL 9 (regular officers)
	Number of students admitted:	30
III.	Name of university:	Hokkaido Imperial University (Hokkaido Teikoku Daigaku)
	Address:	Kita-Hachijo, Sapporo City, Hokkaido Prefecture
	Source of support:	Ministry of Education
	Period of study:	Three years

TABLE 4

FISHERIES RESEARCH STATIONS OPERATED BY THE JAPANESE CENTRAL GOVERNMENT

A. Name of laboratory: The Central Imperial Fisheries Experimental Station or the Fishery Experimental Bureau (Suisan Shikensho)
Address: Tsukishima, Kyobashi-ku, Tokyo.
Established: April 1929.
Director: Nobuichi Kasuga until March 1946; now M. Tauchi.
Source of support: Ministry of Agriculture and Forestry.
Annual appropriation: ¥ 338,533 (1936-1940); ¥ 579,305 (1941-45)
Number of people employed:

Senior research men	22
Assistant research men	15
Lay assistants	4
TOTAL	41

Research vessel: Soyo Maru, 202 gross tons.

BRANCH STATIONS OF THE CENTRAL IMPERIAL FISHERIES EXPERIMENTAL STATION

A. Name of laboratory: Branch Station at Ueda (Ueda Bunjo)
Address: Komaki, Ueda City, Nagano Prefecture.
Established: April 1940.
Director: Minoru Kawajiri (in 1945)
Annual appropriation: From ¥ 2,000-10,000
Number of people employed:

Senior research man	1
Lay assistants	2
TOTAL	3

Type of research carried on: Experiments on the artificial methods of taking eggs and fry of fresh-water fish.

B. Name of laboratory: Branch Station at Nanao. (Nanao Bunjo)
Address: Wakura-machi, Nanao City, Ishikawa Prefecture.
Established: April 1941.
Director: Yasuo Suehiro (in 1945)
Annual appropriation: From ¥ 2,000-10,000
Number of people employed:

Senior research man	1
Assistant research man	1
Lay assistant	1
TOTAL	3

Type of research carried on: Experiment on culture of Japan Sea fish.
Experiment on culture of Japan Algae "Iwanori" (Porphyra pseudolinearis)
Experiment on collecting seed oysters.

C. Name of laboratory: Branch Station at Kasaoka. (Kasaoka Bunjo)
Address: Yokoshima, Suburb of Kasaoka City, Okayama Prefecture.
Established: September 1937.
Director: Daijiro Kusakabe (in 1945)
Annual appropriation: From ¥ 2,000-10,000
Number of people employed:

Assistant research man	1
TOTAL	1

Type of research carried on: Experiments on culture of fish and shell fish of the Inland Sea.

Name of laboratory: Branch Station at Arashima. (Arashima Bunjo)
Address: Arashima, Nogi-gun, Shimane Prefecture
Established: April 1942.
Director: Daijiro Kusakabe (in 1945)
Annual appropriation: From ¥ 1,000-20,000
Number of people employed: Research man resident only during continuation of problem.

Caretaker	1
TOTAL	1

Type of research carried on: Experiments on collecting and culture of seed clams "Mogai" (Anadara subcrenata)

Name of laboratory: Branch Station at Minato. (Minato Bunjo)
Address: Minato-machi, Kimitsu-gun, Chiba Prefecture.
Established: February 1945.
Director: Takeshi Kawana
Annual appropriation: From ¥ 2,000-10,000
Number of people employed: Research man resident only during the continuation of problem.

Caretaker	1
TOTAL	1

Type of research carried on: Experiment on collecting and culture of seed clam "Hamaguri" (Keretrix meretrix).
Experiment on collecting and culture of "Bakagai" (Mactra sulcataria).

TABLE 5. - PREFECTURAL FISHERIES EXPERIMENTAL STATIONS

Prefecture	Laboratory	Address	Director in 1945
Hokkaido	Prefectural Fisheries Experimental Station	Yoichi, Yoichi	Kokichi Oshima
	Branch Station at Hakodate	Hakodate, Benten	
	Branch Station at Nemuro	Nemuro, Nemuro	
	Branch Station at Wakkanai	Soya, Wakkanai	
	Branch Station at Sapporo	Sapporo, Toyohira	
	Branch Station at Chitose	Chitose, Chitose	
	Branch Station at Nijibetsu	Kawakami, Nijibetsu	
	Branch Station at Etorofu	Etorofu, Rubetsu	
	Branch Station at Kitami	Mombetsu, Kamiwakabetsu	
	Branch Station at Kunashiri	Kunashiri, Tomari	
Aomori	Prefectural Fisheries Experimental Station	Hachinoe, Minato	Sensan Nagamine
	Branch Station at Mutsu Bay	Aomori, Sodoji	
	Branch Station at Fukaura	Nishitsugaru, Fukaura	
	Branch Station at Juniko	Nishitsugara, Iwasaki	
	Branch Station at Ohata	Shimokita, Ohata	
	Branch Station at Aisaka	Kamikita, Fujisaka	
Iwate	Prefectural Fisheries Experimental Station	Kamaishi, Kamaishi	Yoshisato Murakami
	Branch Station at Kamaishi	Kamihei, Kamaishi	
	Branch Station at Tsugaruishi	Shimohei, Tsugaruishi	
	Branch Station at Otsuji	Kamihei, Otsuji	
Miyagi	Prefectural Fisheries Experimental Station	Ojika, Watanoha	Tadashi Takeda
	Branch Station at Kesennuma	Motoyoshi, Kesennuma	
Akita	Prefectural Fisheries Experimental Station	Akita, Dotetani	Kiichi Miura
	Branch Station at Hanatate	Senkita, Hanatate	
	Branch Station at Iwamikawa	Kabe, Kawazoe	
Yamagata	Prefectural Fisheries Experimental Station	Nishitagawa, Kamo	Motoharu Tanaka
	Branch Station at Tsukiyama	Nishimurayama, Hondoji	
	Branch Station at Kaguchi	Kitamurayama, Otomi	
	Branch Station at Yonesawa	Yonesawa	
Fukushima	Prefectural Fisheries Experimental Station	Iwashiro, Onahama	Motoo Sotooka
	Branch Station at Aizu	Wakamatsu, Higashiyama	
Ibaraki	Prefectural Fisheries Experimental Station	Naka, Nakaminato	Masao Murakami
	Branch Station at Tsujiura	Niiharu, Tsujiura	Takeo Miyauchi
	Branch Station at Teno	Niiharu, Kamiotsu	
Tochigi	Prefectural Fisheries Experimental Station	Nasu, Kuroiso	Sukehisa Funaki
Gumma	Prefectural Fisheries Experimental Station	Seta, Minamitachibana	Kiyotomo Tasniro
	Branch Station at Kawabe	Tone, Kawabe	
	Branch Station at Akagi	Seta, Fujimi	
	Branch Station at Haruna	Gumma, Murota	
	Branch Station at Minakami	Tone, Minakami	
Saitama	No Station		
Chiba	Prefectural Fisheries Experimental Station	Tateyama, Tateyama	Katsuya Negishi
	Branch Station at Naiwan	Chiba, Samugawa	Shingo Naito
	Branch Station at Katsuura	Izumi, Katsuura	
Tokyo	Prefectural Fisheries Experimental Station	Tokyo, Kamata	Seizaburo Takahashi
	Branch Station at Yoshino	Nishitama, Yoshino	
	Branch Station at Mizumoto	Tokyo, Katsushika	
	Branch Station at Oshima	Oshima, Habunominato	
	Branch Station at Hachijojima	Hachijojima, Mitsune	
Kanagawa	Prefectural Fisheries Experimental Station	Ashigarashimo, Odawara	Daisuke Kanetomo
	Branch Station at Misaki	Miura, Misaki	
	Branch Station at Hakone	Ashigarashimo, Hakone	

TABLE 5. - PREFECTURAL FISHERIES EXPERIMENTAL STATIONS (CONT'D)

Prefecture	Laboratory	Address	Director in 1945
Niigata	Prefectural Fisheries Experimental Station	Mishima, Tomari	Kiyoshi Honda
	Branch Station at Sado	Sado, Morotsu	
	Branch Station at Akanogawa	Nakakamohara, Sugana	
	Branch Station at Uonuma	Nakauonuma, Achigasaki	
Toyama	Prefectural Fisheries Experimental Station	Nakashinkawa, Namekawa	Shigeru Kobayashi
Ishikawa	Prefectural Fisheries Experimental Station	Fugeshi, Usetsu	Tsurumatsu Kikuchi
Fukui	Prefectural Fisheries Experimental Station	Tsuruga, Matsushima	Masao Terao
	Branch Station at Tobuchi	Ono, Tomita	
	Branch Station at Makiya	Nanyo, Kitanarayama	
Yamanashi	No Station		
Nagano	Prefectural Fisheries Experimental Station	Higashichikuma, Akeshina	Muraji Yahiro
	Branch Station at Suwa	Suwa, Shimosuwa	Minoru Toda
Gifu	Prefectural Fisheries Experimental Station	Ogaki, Yasui	Tatsuo Kawahara
Shizuoka	Prefectural Fisheries Experimental Station	Shimizu, Hinode	Osamu Ube
	Branch Station at Ito	Takata, Itc	
	Branch Station at Hamanako	Hamana, Maesaka	
Aichi	Prefectural Fisheries Experimental Station	Hoe, Miya	Tadashi Nagai
	Branch Station at Shimonoishiki	Nagoya, Shimonoishiki	
Mie	Prefectural Fisheries Experimental Station	Shima, Hamashima	Tamezo Hibiya
	Branch Station at Kawagoe	Mie, Kawagoe	Takamishi Fuku
	Branch Station at Owase	Kitamuro, Owase	
Shiga	Prefectural Fisheries Experimental Station	Inukami, Hikone, Matsubara	Seizo Suzuki
	Branch Station at Inukami	Inukami, Hikone	
	Branch Station at Tomouchi	Takashima, Momose	Yoji Kitakawa
	Branch Station at Samegai	Sakata, Samegai	Tadao Okuno
	Branch Station at Tokiwa	Kurita, Tokiwa	
Kyoto	Prefectural Fisheries Experimental Station	Yosa, Miyazu	Tsuguo Isawa
Osaka	Prefectural Fisheries Experimental Station	Izukita, Takaichi	Riichi Kotama
Hyogo	Prefectural Fisheries Experimental Station	Akashi, Funa	Masao Okaii
	Branch Station at Tajima	Shirozaki, Kasumi	Eisaburo Noguchi
	Branch Station at Yamada	Kamisaki, Yamada	
Nara	No Station		
Wakayama	Prefectural Fisheries Experimental Station	Tanabe, Kamiyashiki	Sotaro Kimura
Tottori	Prefectural Fisheries Experimental Station	Tottori	Isamu Higashida
	Branch Station at Sakai	Nishihaku, Sakai	
Shimane	Prefectural Fisheries Experimental Station	Naka, Hamada	Masami Shimamoto
	Branch Station at Tamayu	Yasuka, Tamayu	
	Branch Station at Iki	Shimane, Iki	
Okayama	Prefectural Fisheries Experimental Station	Okayama, Kamifukunishi	Tetsuo Igarashi
Hiroshima	Prefectural Fisheries Experimental Station	Mukainada, Hiroshima	Tadahiko Uemura
	Branch Station at Kusatsu	Hiroshima, Kusatsu	
	Branch Station at Tsuka	Numasumi, Tomo	
Yamaguchi	Prefectural Fisheries Experimental Station	Otsu, Senzaki	Misono Takeo
	Branch Station at Sekitonaikai	Sawa, Bofu	Tadashi Fujita
Tokushima	Prefectural Fisheries Experimental Station	Kaibe, Kiwasa	Mizuo Ichibashi
Kagawa	Prefectural Fisheries Experimental Station	Okawa, Shido	Mizuo Ichida

TABLE 5. - PREFECTURAL FISHERIES EXPERIMENTAL STATIONS (CONT'D)

Prefecture	Laboratory	Address	Director in 1945
Ehime	Prefectural Fisheries Experimental Station Branch Station at Toyo	Uwajima, Meirin Arai, Saiyo	Hiroe Takahashi
Kochi	Prefectural Fisheries Experimental Station	Takaoka, Suzaki	Kyuji Doi
Fukuoka	Prefectural Fisheries Experimental Station Branch Station at Ariakekai Branch Station at Busenkai	Fukuoka, Suzakiura Yamato, Okibata Chikuyo, Ujima	Morimizu Kanemoto Yoishi Oshima
Saga	Prefectural Fisheries Experimental Station Branch Station at Ariakekai Branch Station at Matsuurakai	Saga, Akamatsu Fujitsu, Hama Karatsu, Nishikaratsu	Takio Imamura Yoshiyuki Inami
Nagasaki	Prefectural Fisheries Experimental Station	Nagasaki, Katsuyama	Michitono Tanaka
Kumamoto	Prefectural Fisheries Experimental Station Branch Station at Ushifuka	Kumamoto, Tenjin Amakusa, Ushifuka	Yasuo Nagakawa
Oita	Prefectural Fisheries Experimental Station	Kitakibe, Usukine	Hikoichi Mori
Miyazaki	Prefectural Fisheries Experimental Station	Minaminaka, Aburasu	Tetsuichi Sone
Kagoshima	Prefectural Fisheries Experimental Station Branch Station at Oshima	Kagoshima Oshima, Koniya	Junichiro Furukawa
Okinawa	Prefectural Fisheries Experimental Station	Nawa, Kakibana	

TABLE 6. - MARINE RESEARCH STATIONS ASSOCIATED WITH UNIVERSITIES AND FISHERIES COLLEGES

Prefecture	Laboratory	Address	Director (1945)	University
Hokkaido	Akkeshi Marine Biological Station	Akkeshi	Okuma	Hokkaido Imperial University
Hokkaido	Oshoro Marine Biological Station	Oshoro	--	Hakodate Fisheries College
Aomori	Asamushi Marine Biological Sta	Asamushi	S. Kobuko	Tohoku Imperial University
Aomori	Aomori Fishery Experimental Sta	Aomori	U. Nishioka	Tohoku Imperial University
Miyagi	Onagawa Fishery Experimental Sta	Onagawa	T. Imai	Tohoku Imperial University
Kanagawa	Misaki Marine Biological Station	Misaki	K. Kikuchi	Tokyo Imperial University
Aichi	Shinmaiko Fisheries Experimental Station	Shinmaiko	Y. Oshima	Tokyo Imperial University
Aichi	Ikawazu Fisheries Exptl Station	Ikawazu	--	Tokyo Imperial University
Shizuoka	Shimoda Marine Biological Station	Shimoda	Takatsuki	Tokyo Imp Univ Science & Arts
Chiba	Tateyama Practical Fisheries Sta	Tateyama	--	Tokyo Fisheries College
Chiba	Kominato Marine Biological Sta	Kominato	T. Ino	Tokyo Fisheries College
Shizuoka	Numazu Practical Techno Sta	Numazu	--	Tokyo Fisheries College
Shizuoka	Yoshida Practical Piscicul Sta	Yoshida	--	Tokyo Fisheries College
Yamanashi	Oizumi Practical Piscicul Sta	Oizumi	--	Tokyo Fisheries College
Mie	Kashikojima Marine Biological Sta	Kashikojima	--	Nagoya Imperial University
Mie	Mie Marine Biological Station	Mie	--	Osaka Imperial University
Kyoto	Otsu Hydro-Biological Station	Otsu	--	Kyoto Imperial University
Wakayama	Seto Marine Biological Station	Seto	--	Kyoto Imperial University
Hiroshima	Hiroshima Biological Station	Hiroshima	--	Hiroshima University
Fukuoka	Kitazaki Fishery Experimental Sta	Kitazaki	--	Kyushu Imperial University
Kumamoto	Amakusa Marine Biological Station	Amakusa	--	Kyushu Imperial University

TABLE 7. - PRIVATELY OWNED FISHERIES EXPERIMENTAL STATIONS

I. Name of Laboratory: Institute of Japan Marine Products Company Ltd. (Nippon Suisan Kabushiki Kaisha Kenkyujo)

Address: 700, Odawara, Kanagawa Prefecture

Director: Motosaku Fujinaga

Annual appropriation: ¥ 250,000

Number of people employed:

Senior research man	1
Assistant research men	15
Lay assistants	7
TOTAL	23

II. Name of Laboratory: Branch Station at Toyohama (Toyohama Bunjo)

Address: Toyohama, Aichi Prefecture

Attached to: Institute of Nippon Suisan Kabushiki Kaisha

III. Name of Laboratory: Laboratory of Nichiro Fishery Company (Nichiro Kenkyusho)

Address: Oiwake-cho, Hakodate, Hokkaido Pref.

Director: Tenbei Kokura

Annual appropriation: ¥ 60,000

Number of people employed:

Senior research man	1
Assistant research men	6
Lay assistants	3
TOTAL	10

Type of Research Carried on:
1. Utilization of waste material
2. Salt production
3. Fish drying and processing

TABLE 8. - PRIVATELY ENDOWED MARINE LABORATORY

Name of Laboratory:	The Mitsui Institute of Marine Biology (Mitsui Kaiyo Seibutsu Kenkyusho) Suzaki Hamazaki Mura, Kamo-gun, Shizuoka Prefecture
Director:	Ikusaku Amemiya
Source of support:	Takanaga Mitsui donates about ¥ 30,000 a year

TABLE 9. - FISHERIES EXPERIMENTAL STATION IN FORMER COLONIES AND MANDATED AREAS

Colony or Mandated Area	Laboratory	Address	Director a/
Korea:	Central Korean Government Station	Keichonan, Fusan	Keizo Nishida
	Branch Station at Hokusen	Kankyohokudo, Seishin	Toshio Narasaki
	Branch Station at Chinkai	Chinkai, Shogen	--
Shuseinan	Provincial Fisheries Experimental Station	Honei, Okawamen	--
Zenrahoku	Provincial Fisheries Experimental Station	Zenrahokudo, Gunzan	--
Zenranan	Provincial Fisheries Experimental Station	Zenranando, Moppo	Hiroshi Yoshida
Zenranan	Branch Station at Reisui	Zenranando, Reisui	--
Keichohoku	Provincial Fisheries Experimental Station	Geinishi, Hoko	--
Keichonan	Provincial Fisheries Experimental Station	Minamitomitami, Fusan	--
Kokai	Provincial Fisheries Experimental Station	Heishin, Ryukoto	--
Kogen	Provincial Fisheries Experimental Station	Koryo, Shumonshin	--
Kankyonan	Provincial Fisheries Experimental Station	Kankyonando, Genzan	Sadagoro Matsuzawa
Kankyonan	Branch Station at Kogen	Kankyonando, Kogen	--
Kankyohoku	Provincial Fisheries Experimental Station	Kankyohokudo, Seishin	--
Formosa:	Government Gen Fisheries Experimental Sta	Kirung, Toryo-cho	Sogo Tetsumoto
	Branch Station at Tainan	Tainan, Kamikonroku	--
Taihoku	Provincial Fisheries Experimental Station	Kirung, Hama-cho	Shigeru Yasaka
Shinchiku	Provincial Fisheries Experimental Station	Shinchiku, Omotecho	Shichiro Sakaire
Taichu	Provincial Fisheries Experimental Station	Taichu, Saiwai-cho	Hitoshi Hiratsuka
Takao	Provincial Fisheries Experimental Station	Takao, Shinhama-cho	Izo Soejima
Karafuto, Sakhalin:	Provincial Fisheries Experimental Station	Maoka-gun, Rakuma	Masao Murai
South Seas:	Provincial Fisheries Experimental Station	Palau, Korol Island	Kiyoshi Okajima
Kwantung:	Provincial Fisheries Experimental Station	Dairen, Tenzanton	Masakatsu Fushiki
Manchuria:	Government Gen Fisheries Experimental Sta	Harbin, Chuo-machi	Mitsuo Aoki
Eiko	Branch Station at Eiko	Taikoku, Shisei-gai	Juichi Nozawa
Kichirin	Branch Station at Kichirin	Kichirin, Kinon-gai	--

a/ The directors given are the last directors known to have been there. These may be changed by now.

23753